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Android Application for Attendance System using QR Code and Speech synthesis

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ABSTRACT: From the olden times till date in every college, student's attendance is taken manually. It requires paper work. Many a times students can give false attendance. In order to reduce some of the teacher's workload and to increase the efficiency of the attendance system we dedicate this project to creating an android based application to take attendance using student's qrcode scanner and voice based command system. It is the basic nature of humans is to make mistake. This application will help in avoiding the mistakes and make the process a little bit easier. Information can be extracted in a better way using the android based application. Android is an open source Linux based system developed by Google and primarily aimed at mobile handsets and other portable devices. In short, we will be using them to accomplish daily tasks. One application that falls into this category is the Android Application for Attendance in colleges. This application gives the information about student attendance in the college. In our application the different functions are opens using voice based command. In that we also show the defaulter list of a student who does not attend the lectures regularly. A warning sms/mail will be sent to the students whose chances of coming in the defaulters are high, helping them to avoid coming in the defaulters.

KEYWORDS: Android, Voice Commands, QR Code, Attendance

I. INTRODUCTION

This project uses a QR code scanner to scan the student's attendance and update his/her attendance in the database accordingly. The database can then be queried in order to find the students with minimum attendance, the exact dates they did not attend the lectures and these dates will be sent to the students. There will be a warning SMS/mail sent to the students whose chances are there to come in defaulters.

Taking attendance in a class is a very time consuming process and also fake attendance can be given by the students. We can provide voice based QR code attendance process for every lecture which will prevent fake attendance from any student. Students will receive a SMS when their attendance is less than the threshold after 15 days, so they can attend lectures and avoid coming in the defaulters. The defaulters list can be directly SmS/email to students and the students whose attendance is good can be sent a mail of appreciation. In our application admin can add student details and faculty details. Student scan the QR code which is generated by the faculty. Faculty can take attendance using QR code.

II. LITERATURE SURVEY

P.Jessenth Ebenezer, M.R.Muralidharan, S.Srikanth, E.Ramesh, Mr.S.Prabhu introduced In this project, the lecturer's workload of maintaining the student's academic related information is reduced with the help of "ANDROID APPLICATION FOR STUDENT ACTIVITY REGISTER" which is a real time application. This application consists of various systems such as attendance system, mark entry system, auto calculation system, report generation system. Auto calculation system will help to calculate the cumulative attendance, internal marks, GPA and CGPA. Report generation system will help to generate report of the cumulative attendance, individual performance, class performance. They can easily get the updates about their performance and parents also updated about their wards performance. It reduces the time and workload of the lecturers.[1]

P.Aruna, M.Sharmila Begum and D.Maghesh Kumar Assistant Professor, Developing mobile application is a crucial and essential process in any organization to improve the communication and productivity. Creating a mobile

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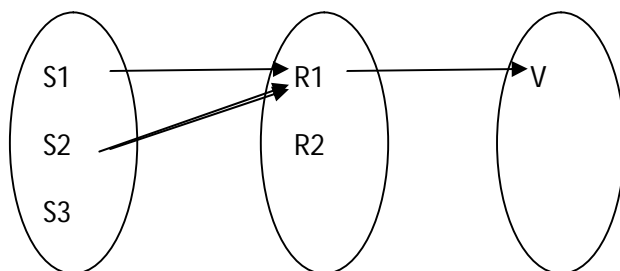
application can accomplish a complex and time consuming task in an efficient way. In this paper, an android application system called “Alumni Smart Connect” is proposed to develop an effective mobile user interface design to connect and collaborate former students of institution. Smart organization of screen elements in the system helps the people to understand the interface easier and make communication quickly. This app is developed to allow the alumni members in the institution to have connected and communicate easily. This app allows the user to post messages, displays recent news and photos, inaugurate forum, and have live conversation with friends.[2]

S. Sangeethaa, G. Kirubhakar introduced In the previous system, all the information has to view in a hard file, or in website. At the same time while searching any information it is too difficult to access and takes a lot of time to search the particular website. Hence, in order to overcome this problem a smart phone based application using Android can be used to make this process more easier, secure and less error prone. One application that falls into this category is the Android Application for College. This College application provides a wide range of useful information which split into several functionalities. These include: academics, news, events, facilities, and all the college details. Users can install this application in their android mobile to view all of these college details and make use it.[3]

DhanishKothare, Atitkumar Sharma, DarshanaBamne, Vijal Jain UG Scholar introduced The basic aim of the project is to replace notice boards. Everything must be in one place. Now there is no need to maintain number of accounts for sharing information, exchanging of notes, any important notice and all colleges related news, now it will be accessible anywhere any time just on single click at one place. This project includes 4 major activities: Schedule, E-Notice, Attendance, print access. Using this application students will able to stay updated with their assignments provided in the class, timetables of examinations, attendance, etc. An android based college campus to share the college campus activities, application will provide updates to the students of their respective departments, notices regarding the recruiting company, campus interview date and other placement activities.[4]

TejashriGosavi, ShraddhaGaikwad, RohitNazirkar, AmolSalke have introduced Android based training and placement automation for campus drive is a System, which automates training and placement activities and provides opportunities to the students, who are eligible according to the company criteria and makes easy the process of managing information regarding students and companies automatically. This system focuses on the automation of the training and placement cell and profile matching. The Developed system can guarantee to keep the records are safe and privacy which is stored in database. In placement system there are many problems to maintain, searching, sorting the entire huge data. The system is provide solutions such as automates the placement procedure for any college. Using Mahout’s Naïve Bayes classification algorithm, it converts and classifies the unstructured data into structured and sorted format. Pattern matching techniques are applied on the data. The Developed system was evaluated, tested, it performs well functional, reliable it very helpful to students to get an alert by the massage on the cell phone.[5]

III. MATHEMATICAL MODEL



S1: Student 1.
SF2: Student 2.

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R1: Scan QR code and give attendance

SP3: Student 3

R2: Error in the giving attendance.

Set Theory:-

$S = \{s, e, X, Y, \Phi\}$

Where,

s = Start of the program.

1. Log in System

2. Scan the QR code and make attendance .

e = End of the program.

Mark the attendance which are present in class.

X = Input of the program.

Input should be QR code.

Y = Output of the program.

Proper generated QR code and scan QR code match then mark the student attendance.

$X, Y \in U$

This module help the faculty can generate QR code and student can scan the QR code.

Let U be the Set of System.

$U = \{S1, S2, S3, R1, R2, MA\}$

Where S1, S2, S3, R1, R2 are the elements of the set.

S1=Student 1 details

S2= Student 2 details

S3= Student 3 details

R1=Get Accurate result

R2= Error in the accessing of the system

MA=Mark attendance using QR code

Failures:

1. Huge database can lead to more time consumption to get the information.
2. Hardware failure.
3. Software failure.

Success:

1. We get mark the attendance using QR code.
2. We get proper defaulter list.

Above mathematical model is NP-Complete.

IV.EXISTING SYSTEM APPROACH

In traditional way, students have to give attendance by calling their roll number every time or sometimes by signing on attendance sheets. This results in a lot of paper work. There are chances that students can give false attendance for the lectures. Along with this, the teachers have to take more efforts for marking each and every student's attendance. Also preparing the defaulters list by calculating the student's attendance is a cumbersome task. So to replace such traditional way of attendance, we have an innovative idea, which focuses on marking attendance through an android application using voice based QR code scanning system.

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V. PROPOSED SYSTEM APPROACH

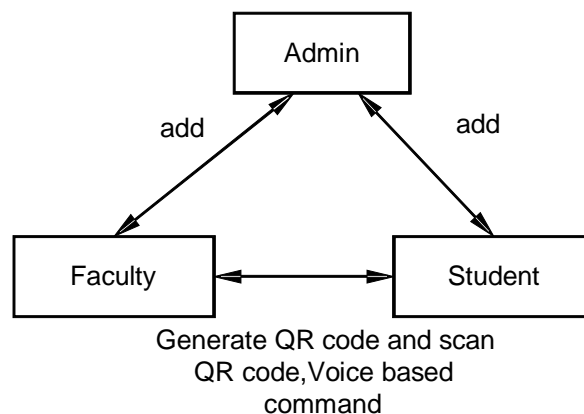


Fig.1 Block Diagram of Proposed System

This project uses a voice based QR code scanner system to scan the QR code and update his/her attendance in the database accordingly. The database can then be queried in order to find the students with minimum attendance, the exact dates they did not attend the lectures and these dates will be sent to the students. There will be a warning mail sent to the students whose chances are there to come in defaulters.

In our system contain 3 modules.i.e.Admin, Faculty, Student

- **Admin:-**
Admin can add all student and faculty details.
- **Student:-**
Student can scan QR code which generated by the faculty device. Student says different voice commands like now to open camera, Submit QR code. After taking the attendance .Student can view the attendance record.
- **Faculty:-**
Faculty can take attendance using QR code. Faculty can generate QR code. View Report of student and also generate Report.

VI. SYSTEM ANALYSIS

In a following table we show the 1 student can attend end different types of a subject lecture like Subject1, Subject2, Subject3, Subject4 and student attending numbers of lectures.

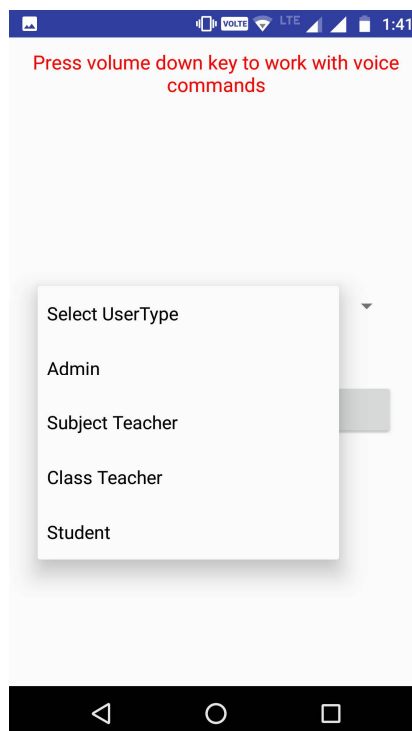
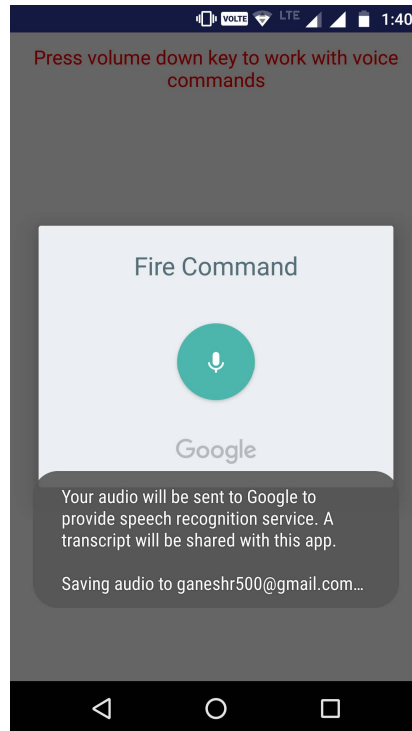
In a following graph we show the 4 different subject like. Subject 1, Subject 2, Subject 3, Subject 4 following graph shows Student attends 20 lecture of subject1, 15 lecture of subject2, 20 lecture of subject3, And 17 lecture of subject4 respectively.

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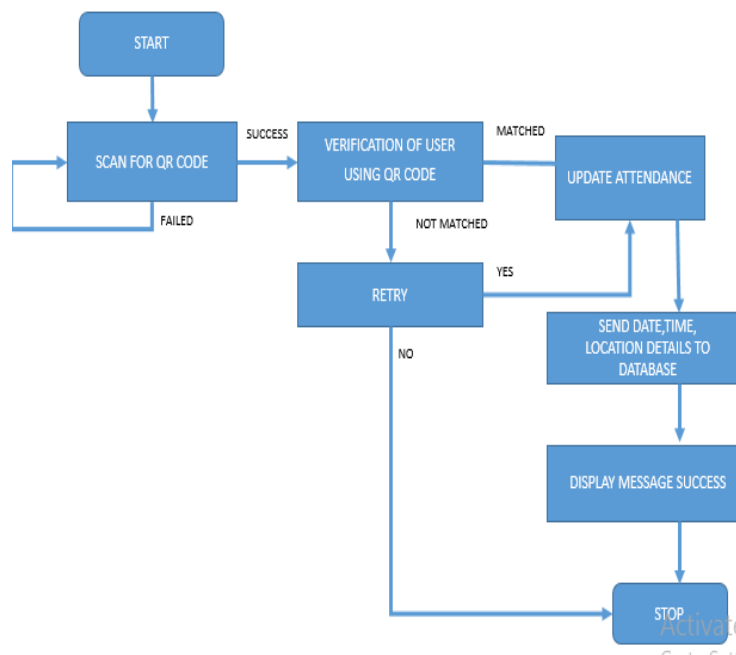
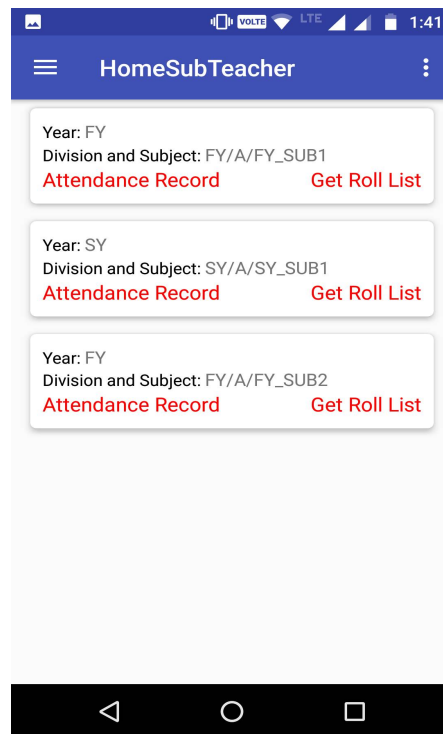


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VII. CONCLUSION

In the previous system, taking attendance in a class is a very time consuming process and also fake attendance can be given by the students. We can provide voice based QR code process for every lecture which will prevent fake



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attendance from any student. Students will receive a mail when their attendance is less than the threshold after 15 days, so they can attend lectures and avoid coming in the defaulters. The defaulters list can be directly mailed to students and the students whose attendance is good can be sent a mail of appreciation. In future we can If some student are regularly attend the lectures then we can provide some rewards like student can get extra book from library.

REFERENCES

- 1.Android Application for Student Activity Register P.Jessenth Ebenezer , M.R.Muralidharan, S.Srikanth, E.Ramesh,Mr.S.PrabhuIJREAT International Journal of Research in Engineering & Advanced Technology, Volume 2, Issue 2, Apr-May, 2014 ISSN: 2320 – 8791
- 2.Alumni Smart Connect through Android Application P.Aruna, M.Sharmila Begum and D.Maghesh Kumar Assistant Professor, Dept. of Software Engineering, PeriyarManiammai University, TamilNadu, India Special Issue Published in International Journal of Trend in Research and Development (IJTRD), ISSN: 2394-9333, www.ijtrd.com
- 3.Android Application for College Website S. Sangeethaa, G. Kirubhakar* South Asian Journal of Engineering and Technology Vol.2, No.17 (2016) 162–166
4. Student Manager an Android App DhanishKothare, Atitkumar Sharma, DarshanaBamne, Vijal Jain UG Scholar , Professor Department of IT VIT, Mumbai, India
- 5.ANDROID BASED TRAINING AND PLACEMENT AUTOMATION TejashriGosavi, ShraddhaGaikwad,RohitNazirkar,AmolSalkeDepartment of Computer Engineering, JSPM's ICOER,Wagholi, Pune, India